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06 May 2013

Enquiry no. PHY/SAR/06MAY2013/NCON-1

Sealed quotations are invited and should reach the undersigned latest by the **27<sup>th</sup> of MAY, 2013**, for:  
**Sub-nanosecond pulsed laser with 1064 nm and 532 nm.**

**Technical Specifications for the Laser system: :**

**The laser will generally be a Diode Pumped Solid State Laser and harmonic doubler. Alternate technologies like a Fibre laser will also be considered.**

1. Wavelength: 532 nm and 1064 nm (Both are needed from the same or different lasers. If the same laser is used, it should be capable of simultaneously producing both 532 nm (SHG) beam and 1064 nm (depleted pump) beam at different output windows. If same output window is used, an external dichroic mirror should be provided for separating out the two beams.)
  2. Pulse width: FWHM 650 picoseconds or lesser at 10 kHz pulse repetition rate (Q-switched or mode-locked lasers).
  3. Pulse energy: variable from 1 microJoule to 100 microjoule on each wavelength when operated simultaneously.
  4. Pulse energy stability: < 3% pulse to pulse energy fluctuations
  5. Pulse repetition frequency: variable from single shot upto 100 kHz
  6. Pulse timing jitter: < 2% of interpulse separation.
  7. Polarization: Linear
  8. Laser beam mode structure: TEM<sub>00</sub> or close to Gaussian with  $M^2 < 1.3$
  9. Beam Divergence: < 3 mrad
  10. Beam size: 2mm to 5mm
  11. Cooling: Air cooled
- Should be inclusive of Power supply and laser controller.
  - Power supply inputs will be 220 V / 50 Hz, Indian standards plug
  - Should be possible to trigger the laser pulses from an external TTL pulse / trigger with a specified time delay.
  - Should be possible to control the laser system(s) with an interfaced computer (PC / laptop).
  - System should have a TTL output for synchronizing / triggering other electronic systems.

**Important essential points:**

The specified numbers for various parameters above are guidelines and can vary for the quoted

systems by utmost 10% from those specified here.

Quote should be made in two parts: Technical bid and Financial bid separately in sealed envelopes. Financial bids for products whose technical bid is not acceptable will not be opened. Any quote where the financial bid is included in the technical bid will be summarily rejected.

The sealed envelopes with the quotes should be superscribed with the Inquiry number and whether it is a technical or financial bid.

Any technical bid wherein only the above specified points are copied and no details about the suppliers own system are given will be summarily rejected. The supplier should necessarily give all the specifications of their own system with pictures and technical literature about their system.

If the product is proprietary, a proper certification to that effect must be made.

Authorization certificate from the Principal manufacturer should accompany the technical bid.

Firms submitting acceptable technical bids may be invited to make a technical presentation on the product to the Purchase committee before opening of the financial bids. The committee may choose to reject the bids of firms not making the presentation at its discretion.

Quotes should be made with options for the following delivery modes

- Ex-works for pickup by our Institute transport provider
- FOB/FCA in country of origin
- CIF, New Delhi
- For delivery to IIT Kanpur

Maximum educational discounts should be applied – apart from research, this equipment will be used to teach and train students.

Quotes should have a minimum validity of 60 days

Address the quotations to

Prof. S. Anantha Ramakrishna  
Department of Physics  
Indian Institute of Technology Kanpur  
Kanpur – 208016 India.

so as to reach before the last date, i.e., 27<sup>th</sup> May 2013

Sincerely  
S. Anantha Ramakrishna